

# **Status report : about the Monolithic Accelerometers(ACCs) Test**

## **☐ Goal**

- ① Estimate the sensitivity of the ACC on the IP,  
by comparing to L-4C geophone sensitivity.  
→ Get the ACC's sensitivity limit at high frequencies.**
- ② Confirm the controllability with the blending,  
using the LVDTs and the ACCs.( mostly in same configuration with Sekiguchi-san's)**

## **☐ Due date**

**Mid of June, ~2016.6.18**

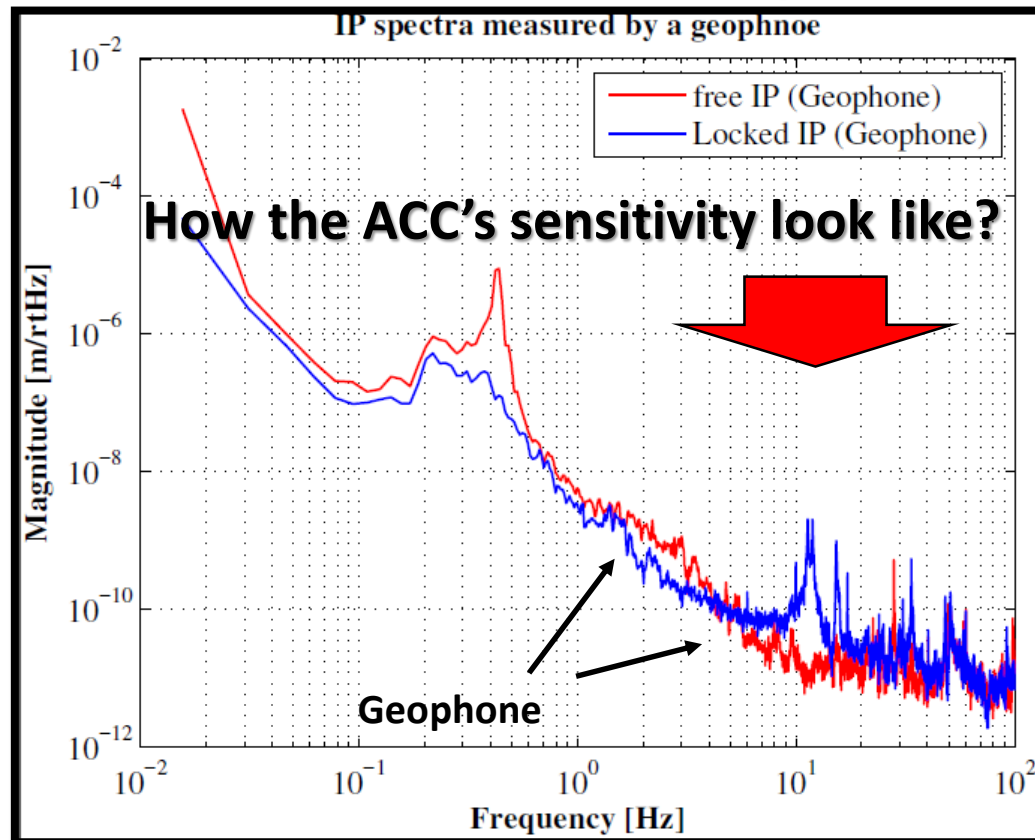
## **☐ Participants (mainly)**

**Joris, Fabian, Takahashi-san, Hirata-san, Fujii,**

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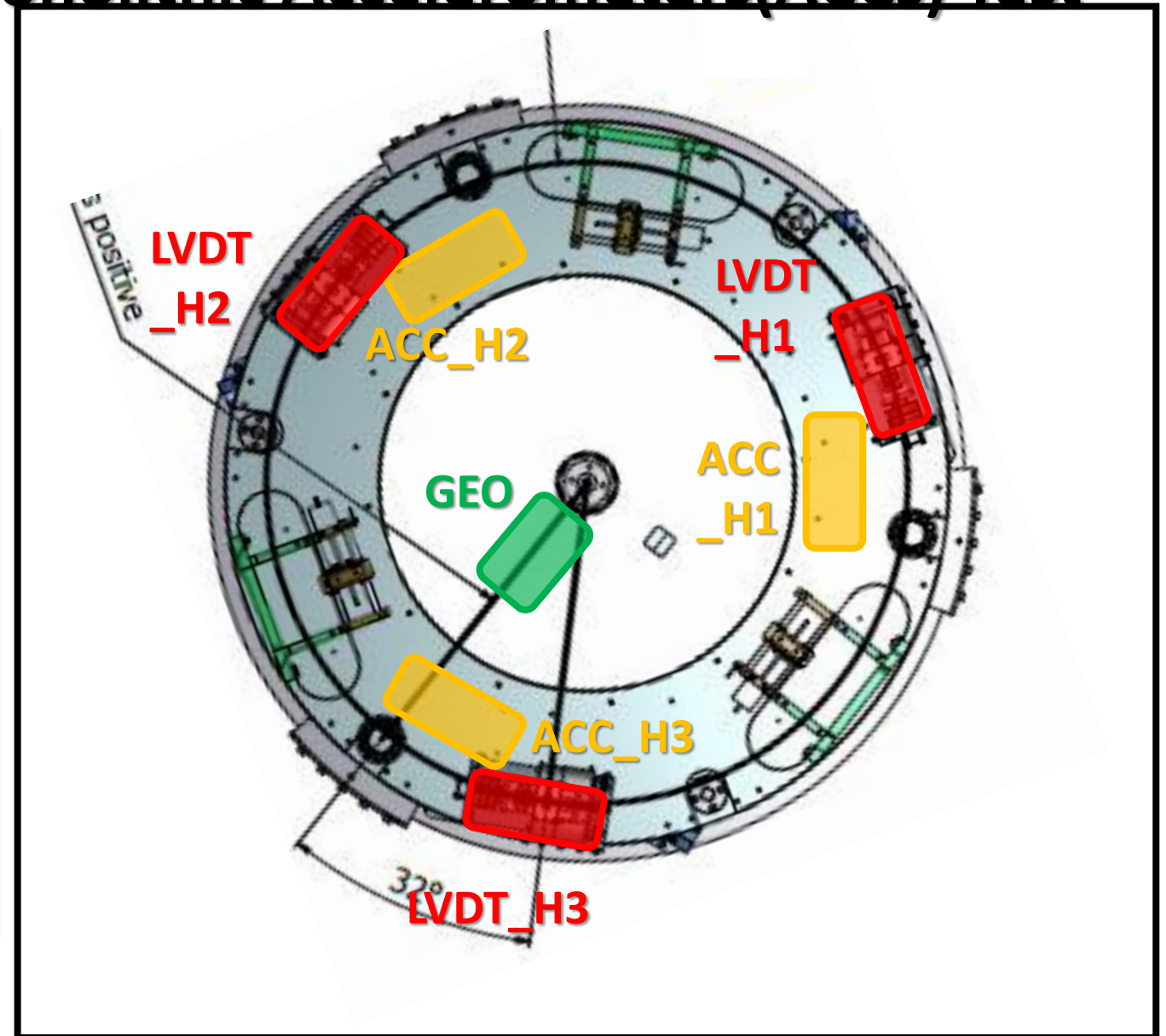
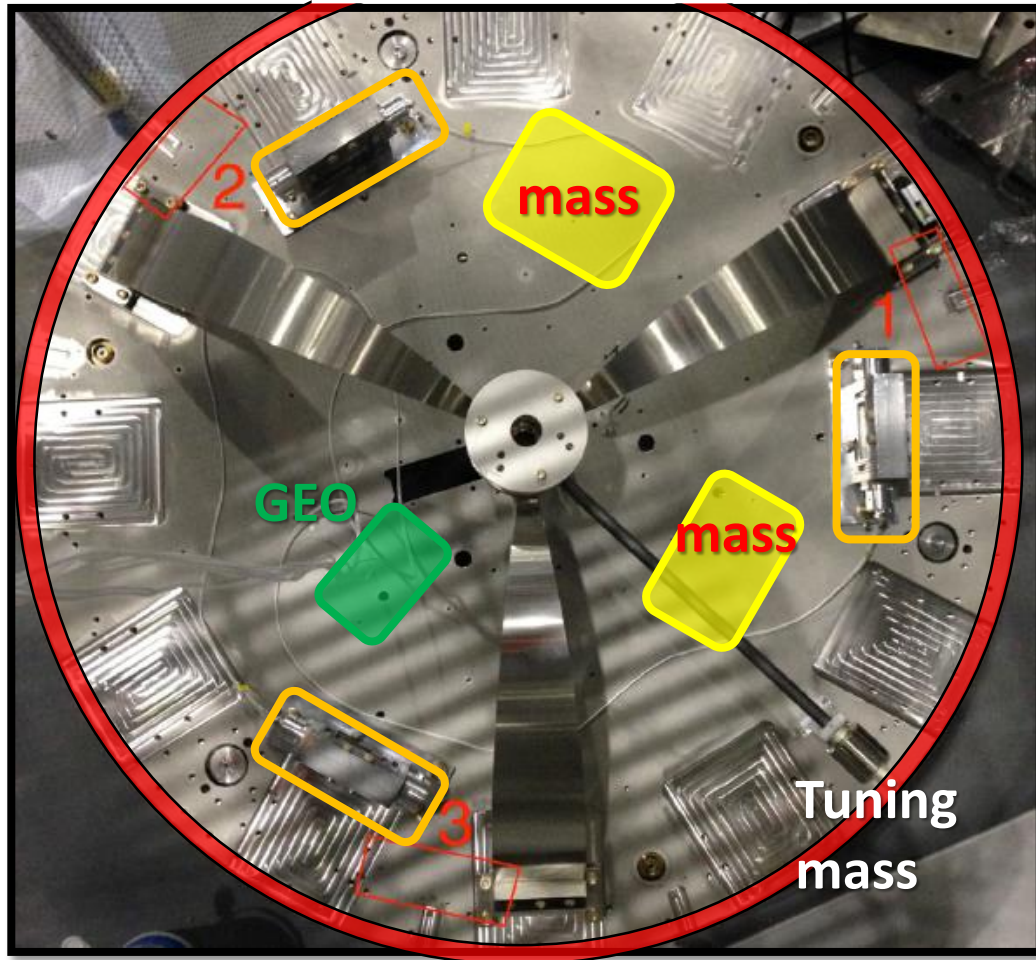
## □ Goal

- ① Estimate the sensitivity of the ACC on the IP, by comparing to L-4C geophone sensitivity.  
→ Get the ACC's sensitivity limit at high frequencies.



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☐ At this stage ;

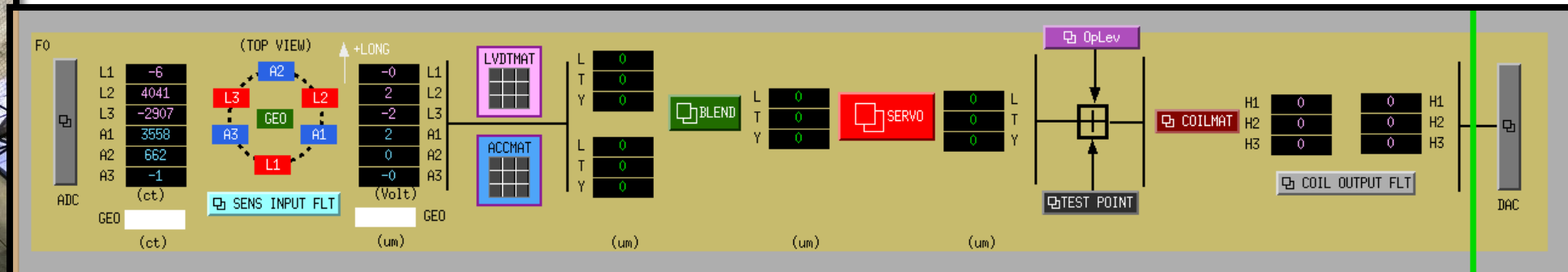
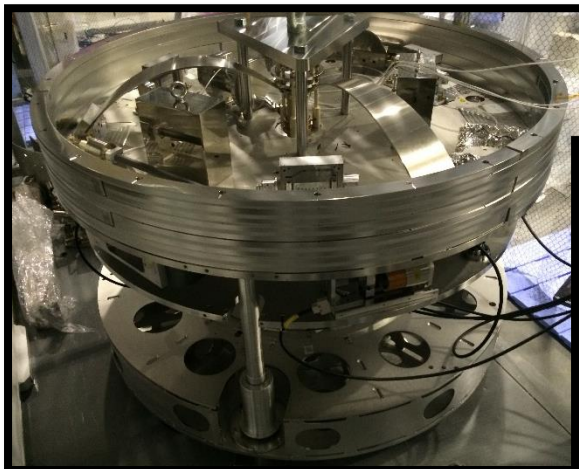


Nothing is suspended on the Top GAS.

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❑ What is done, at this stage ;

- \* Signals from 3 ACCs, 1 Geophone are monitored. (LVDTs are to be added within this month.)
- \* building the digital system, medm screen for this test
- \* Cups and metal board (not wooden board) are installed under the IP legs.
- \* Resonance frequency of the IP translational mode is tuned at ~440 mHz.
- \* ACC signals are calibrated (roughly).
- \* ...



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## To do list

### ACCs

- \* Tune the output of the ACCs
- \* Calibration (more precisely)
- \* Install their “Air shields”
- (\* ACC TF meas.)
- \*

### Filters

- \* Confirm and install the input filters of the ACCs and Geophones
- \* install servo filters for the blending.
- \*

### Others

- \* Do actuator diagonalization
- \* Measure force TFs of the IP
- \* Stepper motor working confirmation(動作確認)
- \* Install a geophone on the ground(to be confirmed).

### LVDTs

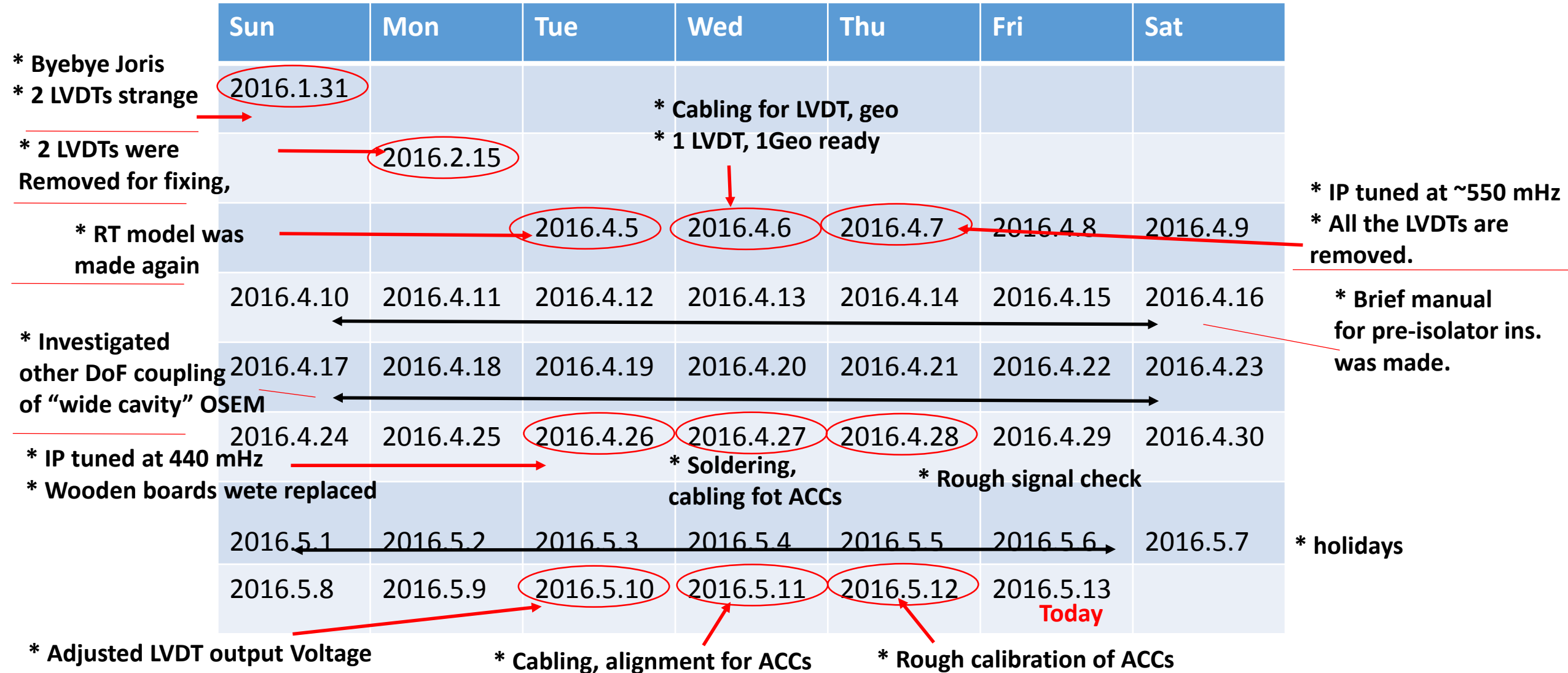
- \* Install to the IP stage, Cabling(圧着)
- \* Calibration
- \*

(Something might be missed.  
Some A/I can be added.)

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## ☐ Schedule

 : work days on IP



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Chief meeting  
at U Totama

\*LVDTs to be returned by here.

## ☐ Schedule

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Installing "Air shields",,,	2015.5.15	2016.5.16	2016.5.17	2016.5.18	2016.5.19	2016.5.20	2016.5.21
	2015.5.22	2016.5.23	2016.5.24	2016.5.25	2016.5.26	2016.5.27	2016.5.28
	2015.5.29	2016.5.30	2016.5.31	2016.6.1	2016.6.2	2016.6.3	2016.6.4
	2015.6.5	2016.6.6	2016.6.7	2016.6.8	2016.6.9	2016.6.10	2016.6.11
	2015.6.12	2016.6.13	2016.6.14	2016.6.15	2016.6.16	2016.6.17	2016.6.18

What I would like to do  
(weekly)

- \* Installing LVDT,
- \* tune the ACC outputs
- \* Calibration (LVDT, ACC)
- \* PR3 measurement,
- \* LVDT setting

\* Start controlling test

Due date

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## ❑ Next step for the next week:

- \* Tune the outputs the ACCs by adjusting the “LVDT cards” .
- \* Calibrate the ACCs more precisely with using aluminum foil etc.
- \* if the LVDTs would be returned, install and do cabling, calibration.

## ❑ To be investigated, found in this week ;

- \* the natural frequencies of the ACCs : all the freq. are shifted stiffer, in some reason.

	Jan.	May
ACC1 :	0.46 Hz	→ 0.6 Hz
ACC2 :	0.89 Hz	→ ~ 1.4 Hz
ACC3 :	1.0 Hz	→ ~ 1.5 Hz

